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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/777,250	02/12/2004	Joseph A. Reynick	REYNICK 2	5385
27964	7590	08/12/2004	EXAMINER	
HITT GAINES P.C. P.O. BOX 832570 RICHARDSON, TX 75083			KOBERT, RUSSELL MARC	
			ART UNIT	PAPER NUMBER
			2829	

DATE MAILED: 08/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/777,250

Applicant(s)

REYNICK, JOSEPH A.

Examiner

Russell M Kobert

Art Unit

2829

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 February 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 33-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 33,35 and 36 is/are rejected.
- 7) ☒ Claim(s) 34 and 37-42 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 0204.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Art Unit: 2829

1. In claims 37 and 38, line 11, the phrase "a the current signature" is assumed to imply "a current signature."

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 33, 35 and 36 are rejected under 35 U.S.C. 102(e) as being anticipated by Vu et al (6140832).

Vu et al anticipates (Figure 2) an apparatus for identifying defects in an integrated circuit, comprising: a generator (part of the operation of Functional Test blocks 22 and 23) for generating a set of vectors for applying to a device under test; a measurer (another aspect of the operation of Functional Test blocks 22 and 23) for measuring a current signature delta value of the device under test; and a comparing means for comparing the current signature delta value to an experimental threshold current signature delta value to determine whether the current signature delta value is greater than the threshold current signature delta value (col 3, ln 12-22, 26-43 and col 4, ln 28-38; see also Figure 4, IDDQ Delta process limits); as recited in claim 33.

As to claim 35, Vu et al anticipates (Figure 2) the apparatus further comprising a computer (20) for computing the experimental threshold current signature delta value (26).

As to claim 36 Vu et al anticipates the apparatus wherein the generator generates a set of measured vectors (data loaded into database 24) from the set of vectors (pre-stress and post-stress functional tests) for applying to the device under test (col 3, ln 26-29).

4. The following is a statement of reasons for the indication of allowable subject matter:

Claims 34 and 37-42 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

As to claim 34 the added limitation of the measurer measures the experimental threshold current signature delta value for the statistically valid number of acceptable integrated circuits by:

- applying a set of vectors to the statistically valid number of acceptable integrated circuits, formulating a threshold base current signature for the statistically valid number of acceptable integrated circuits from the set of measured vectors;
- administering a voltage stress for a time period to the statistically valid number of acceptable integrated circuits, applying the set of vectors to the statistically valid number of acceptable integrated circuits, formulating a threshold post-stress

current signature for the statistically valid number of acceptable integrated circuits from the set of measured vectors; and

- comparing the base current signature for the statistically valid number of acceptable integrated circuits to the threshold post-stress current signatures for the statistically valid number of acceptable integrated circuits to determine a threshold current signature delta value corresponding to an acceptable integrated circuit;

has not been found.

As to claims 37 and 38 the added limitation of the measurer measures the current signature delta value of the device under test by:

- applying a set of vectors to the device under test;
- formulating a base current signature for the device under test from the set of measured vectors;
- administering a voltage stress for a time period to the device under test;
- applying the set of vectors to the device under test;
- formulating a threshold post-stress current signature for the device under test from the set of measured vectors; and
- comparing the base current signature for the device under test to the post-stress current signatures for the device under test to determine a current signature delta value for the device under test;

has not been found.

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Yang et al (6734028) shows an apparatus for identifying defects in an integrated circuit by applying electrical stress to the integrated circuit under test.

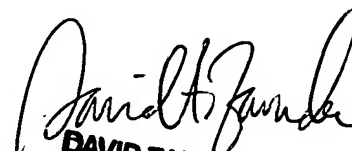
6. In the IDS filed February 12, 2004, the cited reference to U.S. Patent Application Serial No. 09/558,130 has been crossed through. The application has matured to U.S. Patent No. 6,714,032 now indicated on Form PTO-892 attached hereto.

7. A shortened statutory period for response to this action is set to expire three month(s) from the date of this letter. Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Russell Kobert whose telephone number is (571) 272-1963. The Examiner's Supervisor, Kammie Cuneo, can be reached at (571) 272-1957. For an automated menu of Tech Center 2800 phone numbers call (571) 272-2800.



Russell M. Kobert
Patent Examiner
Group Art Unit 2829
July 22, 2004



DAVID ZARNEKE
PRIMARY EXAMINER
7/30/04